

³Physical testing shall be performed as for material manufactured to ASME Specification SA-675, except that the bend test shall not be required.

⁴Allowable stresses shall be the same as those listed in UCS23 of section VIII of the ASME Code for the corresponding SA-182 material.

⁵Limited to air and hydraulic service with a maximum design temperature of 150 °F. The material must not be used for salt water service or other fluids that may cause dezincification or stress corrosion cracking.

⁶[Reserved]

⁷A mercurous nitrate test, in accordance with ASTM B154, shall be performed on a representative model of each finished product design.

⁸Allowable stresses shall be the same as those listed in UNF23 of section VIII of the ASME Code for SB-171, naval brass.

⁹A mercurous nitrate test, in accordance with ASTM B154, shall be performed on a representative model for each finished product design. Tension tests shall be performed to determine tensile strength, yield strength, and elongation. Minimum values shall be those listed in table 3 of ASTM B283.

¹⁰Physical testing, including mercurous nitrate test, shall be performed as for material manufactured to ASTM B21.

¹¹Physical testing shall be performed as for material manufactured to ASTM B96. Allowable stresses shall be the same as those listed in UNF23 of section VIII of the ASME Code for SB-96 and shall be limited to a maximum allowable temperature of 212° F.

¹²Physical testing shall be performed as for material manufactured to ASTM B171, alloy D. Allowable stresses shall be the same as those listed in UNF23 of section VIII of the ASME Code for SB-171, aluminum bronze D.

¹³Physical testing shall be performed as for material manufactured to ASTM B171, alloy E. Allowable stresses shall be the same as those listed in UNF23 of section VIII of the ASME Code for SB-171, aluminum bronze, alloy E.

¹⁴Tension tests shall be performed to determine tensile strength, yield strength, and elongation. Minimum values shall be those listed in table X-2 of ASTM B85.

¹⁵Those alloys with a maximum copper content of 0.6 percent or less shall be acceptable under this specification. Cast aluminum shall not be welded or brazed.

Note: This Table 56.60-2(a) is a listing of adopted bar stock and nonferrous forging and casting specifications not listed in the ASME Code. Particular attention should be given to the supplementary testing requirements and service limitations contained in the footnotes.

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by CGFR 69-127, 35 FR 9978, June 17, 1970; CGD 72-104R, 37 FR 14233, July 18, 1972; CGD 73-248, 39 FR 30839, Aug. 26, 1974; CGD 73-254, 40 FR 40165, Sept. 2, 1975; CGD 77-140, 54 FR 40612, Oct. 2, 1989; CGD 95-012, 60 FR 48050, Sept. 18, 1995; CGD 95-027, 61 FR 26001, May 23, 1996]

§ 56.60-3 Ferrous materials.

(a) Ferrous pipe used for salt water service must be protected against corrosion by hotdip galvanizing or by the use of extra heavy schedule material.

(b) (Reproduces 123.2.3(c)). Carbon or alloy steel having a carbon content of more than 0.35 percent may not be used in welded construction or be shaped by oxygen cutting process or other thermal cutting process.

[CGD 73-254, 40 FR 40165, Sept. 2, 1975]

§ 56.60-5 Steel (High temperature applications).

(a) (Reproduces 123.2.3(a).) Upon prolonged exposure to temperatures above

775° F., the carbide phase of plain carbon steel, plain nickel alloy steel, carbon-manganese alloy steel, manganese-vanadium alloy steel, and carbon-silicon steel may be converted to graphite.

(b) (Reproduces 123.2.3(b).) Upon prolonged exposure to temperatures above 875° F., the carbide phase of alloy steels, such as carbon-molybdenum, manganese-molybdenum-vanadium, manganese-chromium-vanadium and chromium-vanadium, may be converted to graphite.

(c) [Reserved]

(d) The design temperature of a piping system employing one or more of the materials listed in paragraphs (a), (b), and (c) of this section shall not exceed the lowest graphitization temperature specified for materials used.

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by CGFR 69-127, 35 FR 9978, June 17, 1970; CGD 72-104R, 37 FR 14233, July 18, 1972; CGD 73-248, 39 FR 30839, Aug. 26, 1974; CGD 73-254, 40 FR 40165, Sept. 2, 1975]

§ 56.60-10 Cast iron and malleable iron.

(a) The low ductility of cast iron and malleable iron should be recognized and the use of these metals where shock loading may occur should be avoided. Cast iron and malleable iron components shall not be used at temperatures above 450°F. Cast iron and malleable iron fittings conforming to the specifications of Table 56.60-1(a) of this part may be used at pressures not exceeding the limits of the applicable standards of Table 56.60-1(b) of this part at temperatures not exceeding 450°F. Valves of either of these materials may be used if they conform to the standards for class 125 and class 250 flanges and flanged fittings in ANSI B16.1 and if their service does not exceed the rating as marked on the valve.

(b) Cast iron and malleable iron shall not be used for valves or fittings in lines carrying flammable or combustible fluids¹ which are directly connected to, or in the proximity of, equipment or other lines having open flame, or any parts operating at temperatures above 500° F. Cast iron shall

¹For definitions of flammable or combustible fluids, see §§ 30.10-15 and 30.10-22 of subchapter D (Tank Vessels) of this chapter.